

FIG. 1

The diagram illustrates three database tables: Index (202), Data Table (200), and Lock Table (204).

Index (202):

C1	C2	RID
A	1	000201
A	2	000202
B	3	000203

Data Table (200):

RID	C1	C2	C3	C4	Locks
000201	A	1	46	ABC	
000202	A	2	54	LMN	
000203	B	3	23	QWP	
000204					

Lock Table (204):

RID	Lock Attributes	Transaction
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FIG. 2(A)
(PRIOR ART)

202

212

Index

C1	C2	RID
A	1	000201 D
A	2	000202 D
B	3	000203

200

Data Table

RID	C1	C2	C3	C4	Locks
000201	A	1	46	ABC	X
000202	A	2	54	LMN	X
000203	B	3	23	QWP	
000204					

204

Lock Table

RID	Lock Attributes	Transaction
000201	X	Delete C1=A
000202	X	Delete C1=A

FIG. 2(B)
(PRIOR ART)

202	212	200	204																																																																	
<table><tr><th colspan="3">Index</th></tr><tr><th>C1</th><th>C2</th><th>RID</th></tr><tr><td>A</td><td>1</td><td>000201 D</td></tr><tr><td>A</td><td>2</td><td>000202 D</td></tr><tr><td>B</td><td>3</td><td>000203</td></tr></table>	Index			C1	C2	RID	A	1	000201 D	A	2	000202 D	B	3	000203	<table><tr><th colspan="6">Data Table</th></tr><tr><th>RID</th><th>C1</th><th>C2</th><th>C3</th><th>C4</th><th>Locks</th></tr><tr><td>000201</td><td>A</td><td>1</td><td>46</td><td>ABC</td><td>X</td></tr><tr><td>000202</td><td>A</td><td>2</td><td>54</td><td>LMN</td><td>X</td></tr><tr><td>000203</td><td>B</td><td>3</td><td>23</td><td>QWP</td><td></td></tr><tr><td>000204</td><td>A</td><td>1</td><td>86</td><td>NEW</td><td>X</td></tr></table>	Data Table						RID	C1	C2	C3	C4	Locks	000201	A	1	46	ABC	X	000202	A	2	54	LMN	X	000203	B	3	23	QWP		000204	A	1	86	NEW	X	<table><tr><th colspan="3">Lock Table</th></tr><tr><th>RID</th><th>Lock Attributes</th><th>Transaction</th></tr><tr><td>000201</td><td>X</td><td>Delete C1=A</td></tr><tr><td>000202</td><td>X</td><td>Delete C1=A</td></tr><tr><td>000204</td><td>X</td><td>Insert Trans.</td></tr></table>	Lock Table			RID	Lock Attributes	Transaction	000201	X	Delete C1=A	000202	X	Delete C1=A	000204	X	Insert Trans.
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	222	210	220																																																																	

FIG. 2(C)
(PRIOR ART)

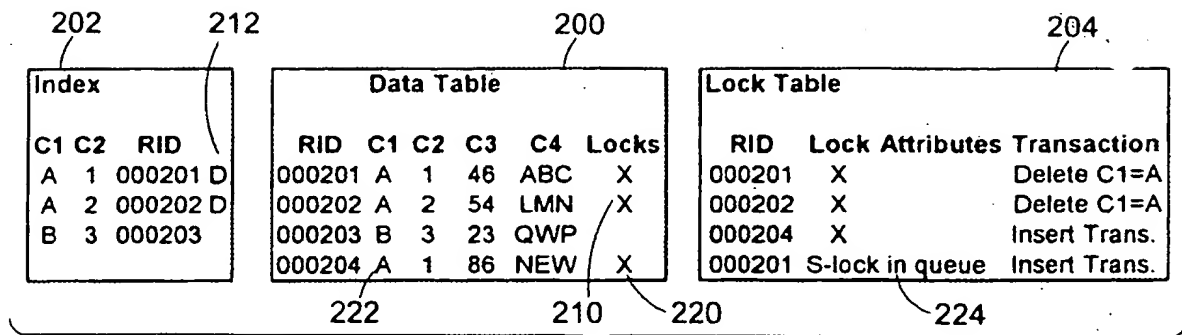


FIG. 2(D)
(PRIOR ART)

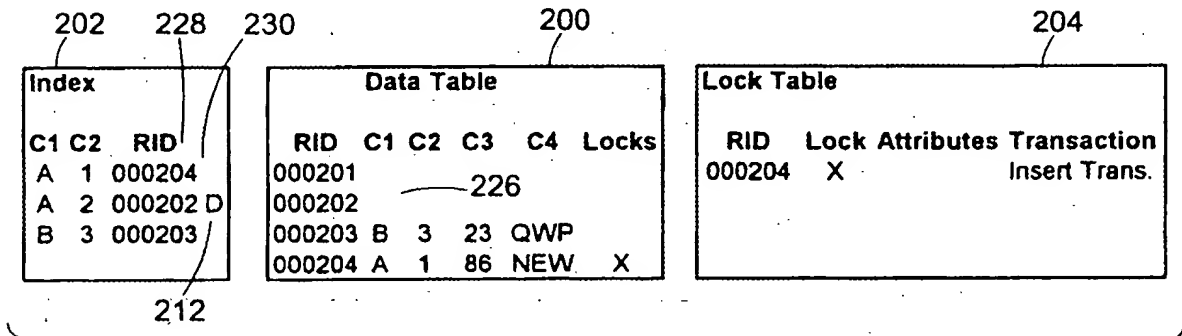


FIG. 2(E)
(PRIOR ART)

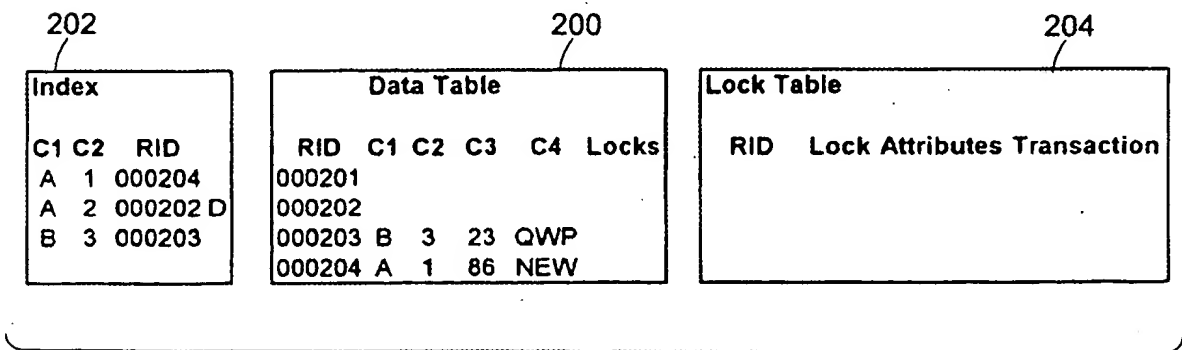


FIG. 2(F)
(PRIOR ART)

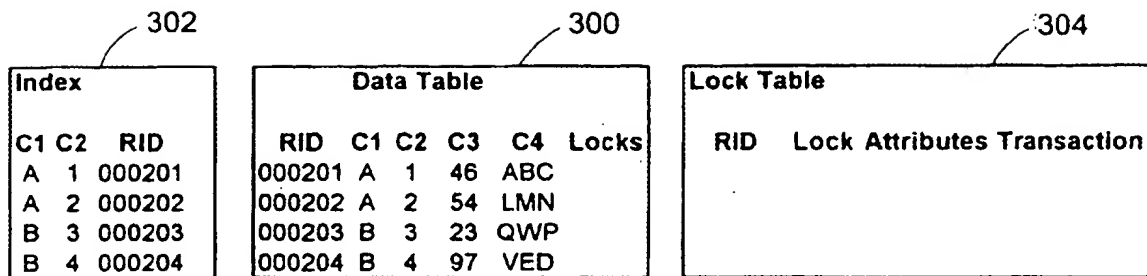


FIG. 3(A)
(PRIOR ART)

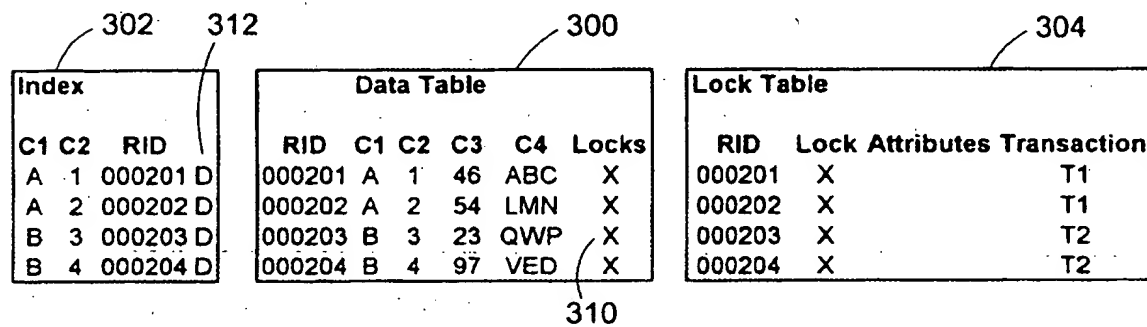


FIG. 3(B)
(PRIOR ART)

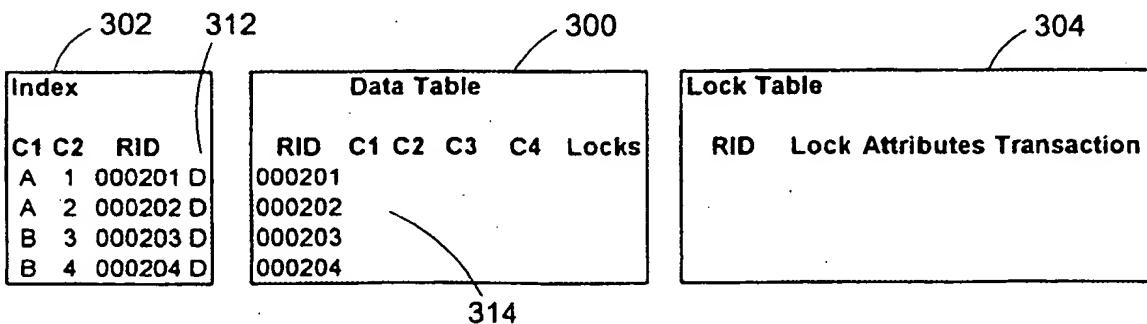


FIG. 3(C)
(PRIOR ART)

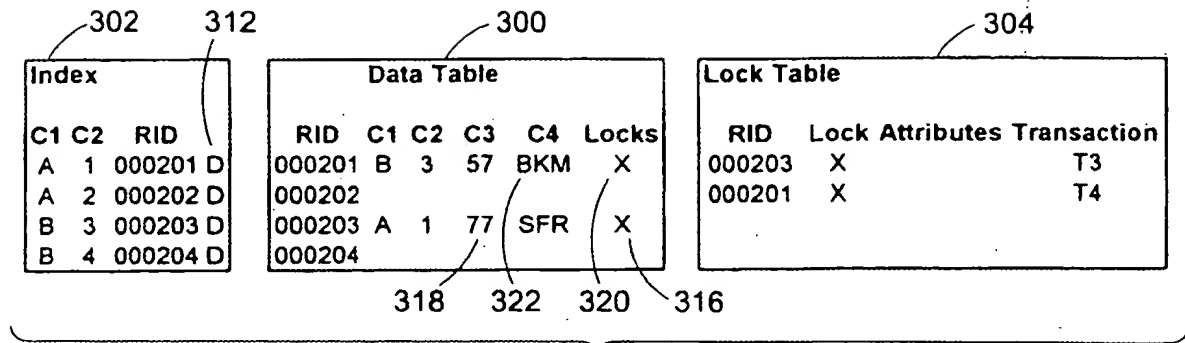


FIG. 3(D)
(PRIOR ART)

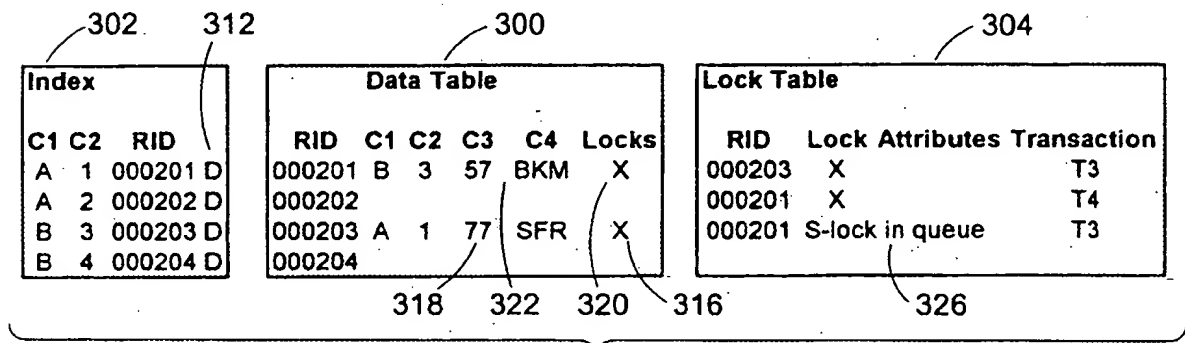


FIG. 3(E)
(PRIOR ART)

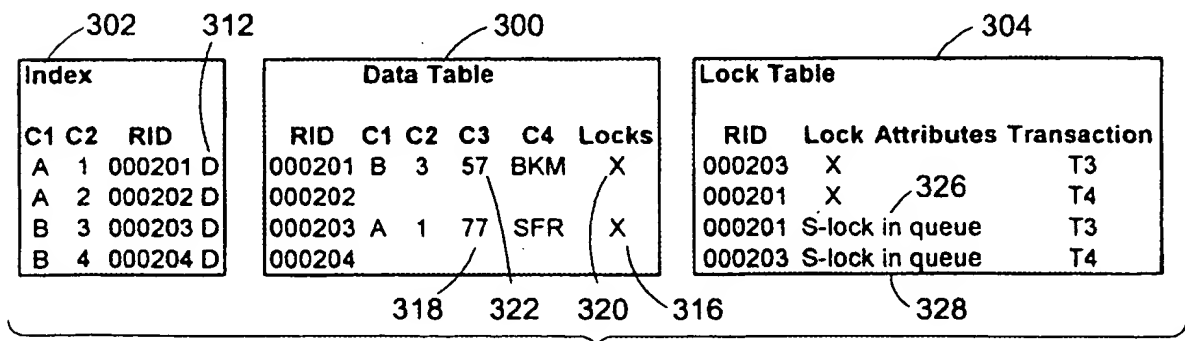


FIG. 3(F)
(PRIOR ART)

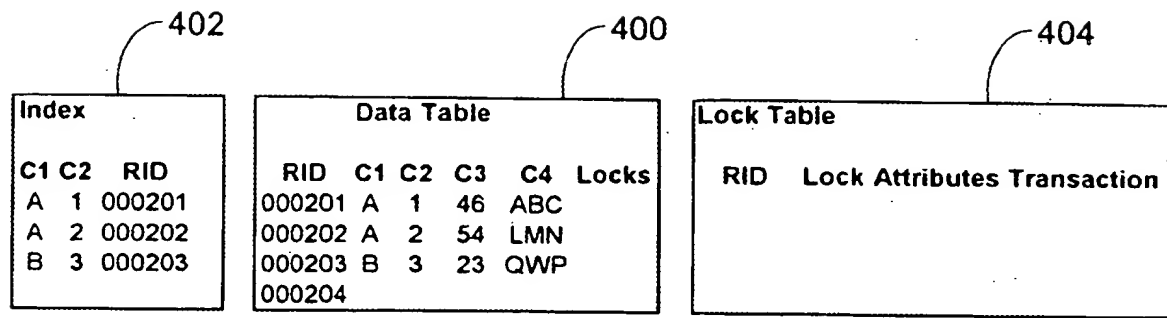


FIG. 4(A)

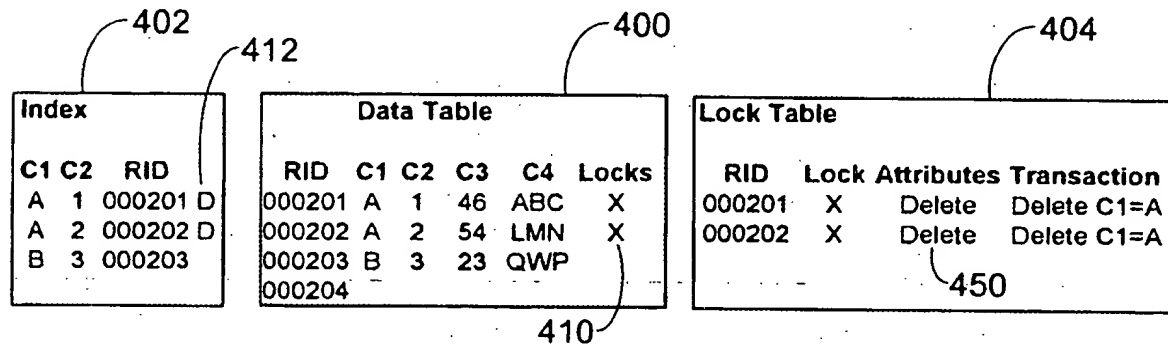


FIG. 4(B)

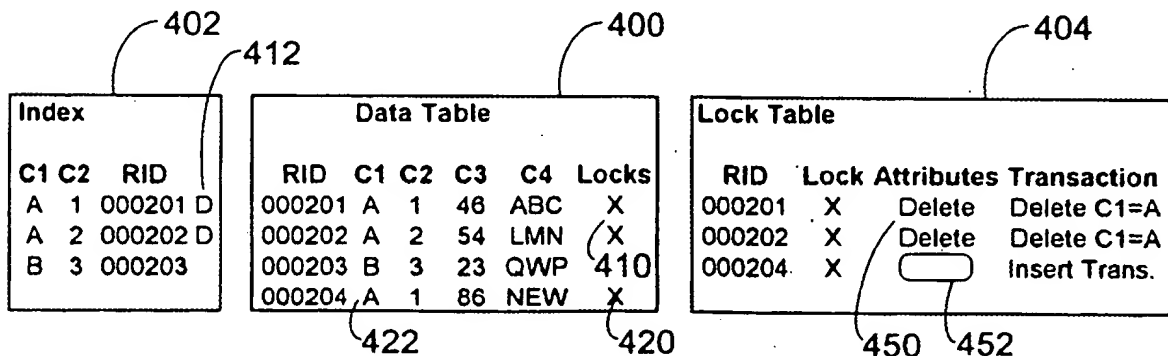


FIG. 4(C)

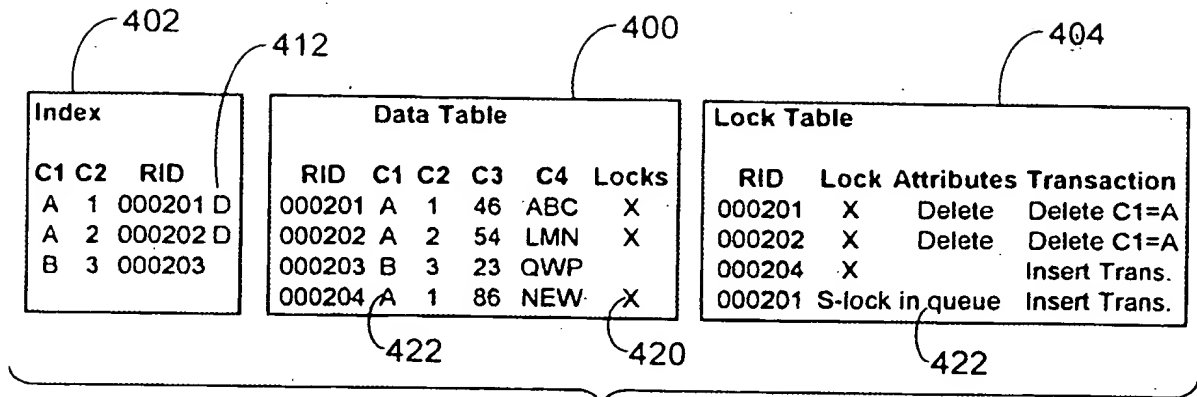


FIG. 4(D)

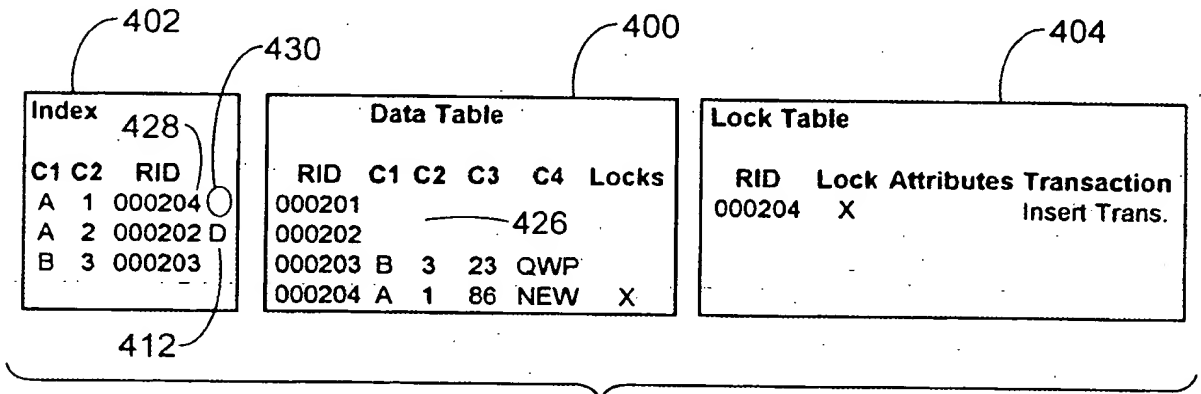


FIG. 4(E)

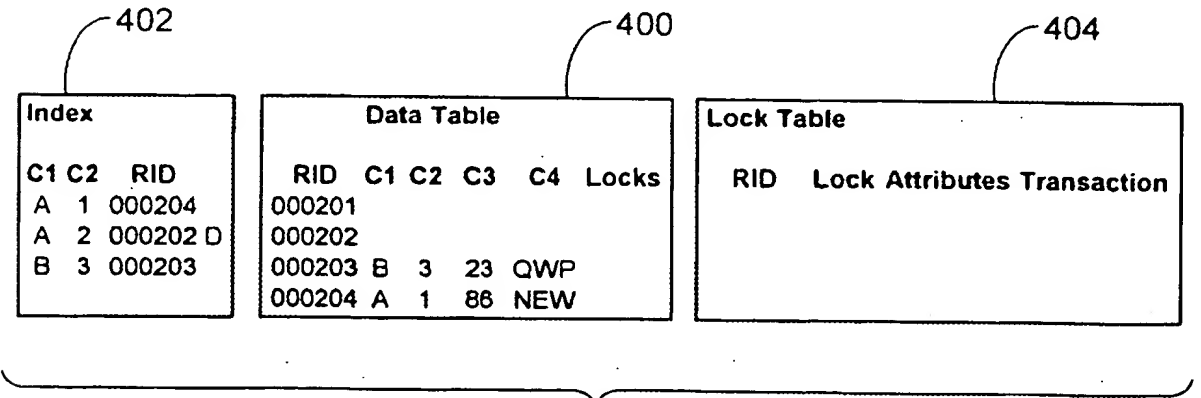


FIG. 4(F)

502

Index		
C1	C2	RID
A	1	000201
A	2	000202
B	3	000203
B	4	000204

500

Data Table					
RID	C1	C2	C3	C4	Locks
000201	A	1	46	ABC	
000202	A	2	54	LMN	
000203	B	3	23	QWP	
000204	B	4	97	VED	

504

Lock Table			
RID	Lock	Attributes	Transaction

FIG. 5(A)

502

512

500

504

510

550

Index

C1

C2

RID

A

1

000201

D

A

2

000202

D

B

3

000203

D

B

4

000204

D

Data Table

RID

C1

C2

C3

C4

Locks

000201

A

1

46

ABC

X

000202

A

2

54

LMN

X

000203

B

3

23

QWP

X

000204

B

4

97

VED

X

Lock Table

RID

Lock

Attributes

Transaction

000201

X

Delete

T1

000202

X

Delete

T1

000203

X

Delete

T2

000204

X

Delete

T2

FIG. 5(B)

502		512		500		504					
Index		Data Table				Lock Table					
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201								
A	2	000202 D	000202								
B	3	000203 D	000203								
B	4	000204 D	000204								

FIG. 5(C)

Diagram illustrating a database structure with three tables: Index (502), Data Table (500), and Lock Table (504).

Index Table (502):

C1	C2	RID
A	1	000201 D
A	2	000202 D
B	3	000203 D
B	4	000204 D

Data Table (500):

RID	C1	C2	C3	C4	Locks
000201	B	3	57	BKM	X
000202			522		520
000203	A	1	77	SFR	X
000204					

Lock Table (504):

RID	Lock	Attributes	Transaction
000203	X		T3
000201	X		T4

Labels and arrows in the diagram:

- 512 points to the RID column in the Index table.
- 518 points to the C3 column in the Data Table.
- 516 points to the Locks column in the Data Table.
- 552 points to the Attributes column in the Lock Table.

FIG. 5(D)

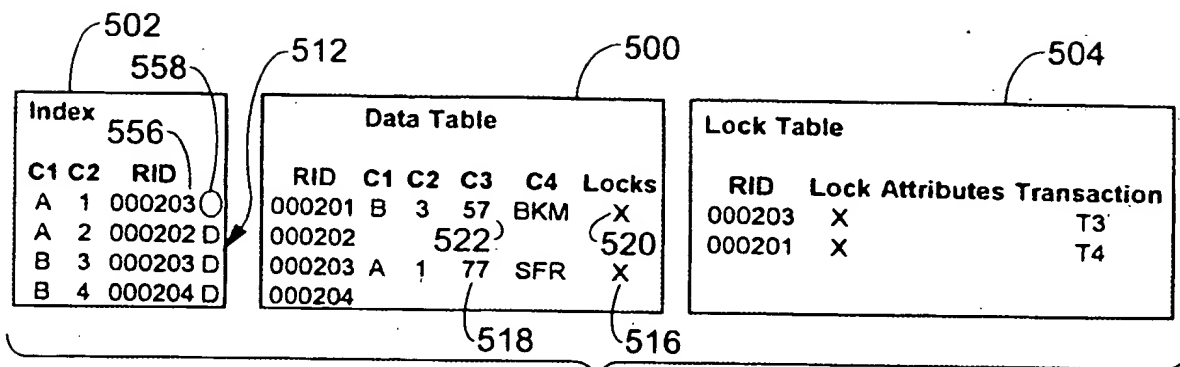


FIG. 5(E)

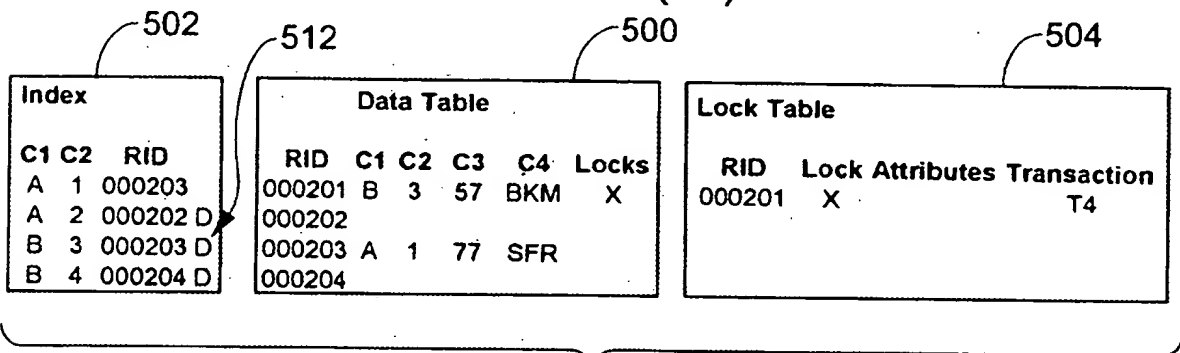


FIG. 5(F)

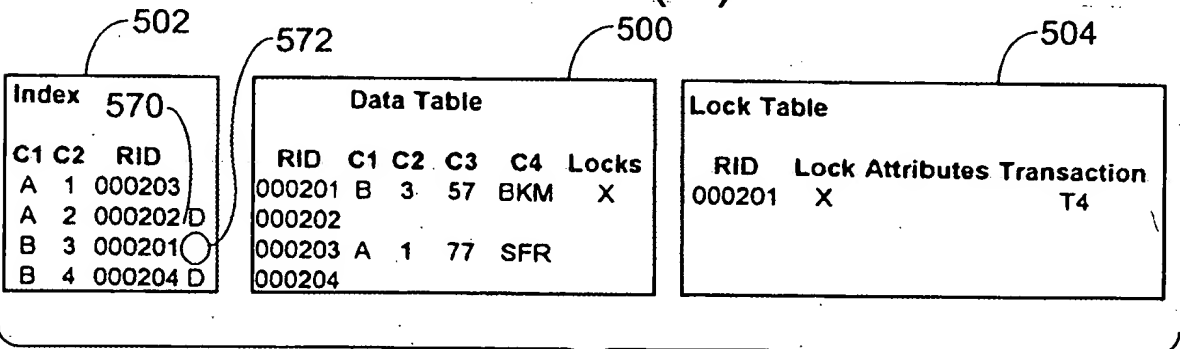


FIG. 5(G)

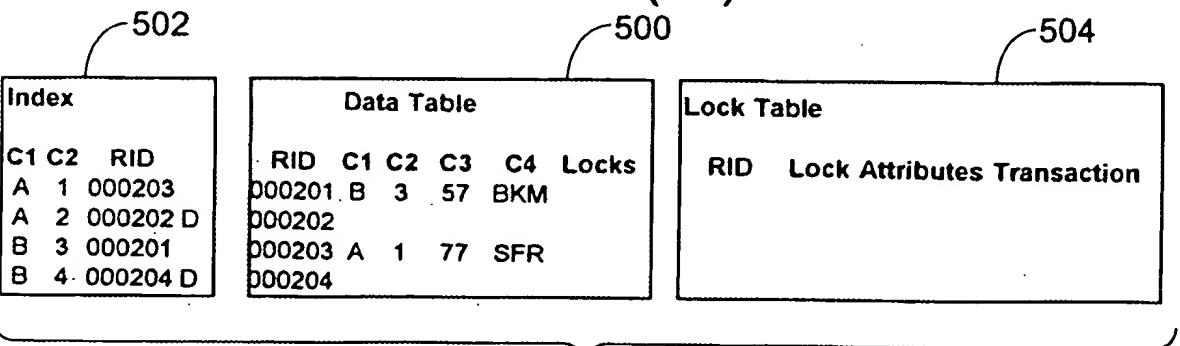


FIG. 5(H)

